



SHAPING OUR WORLD
9 - 16 NOVEMBER 2008

The Secondary Science Week Activity Pack

Movies, Debates, Quizzes and Searches

Make your very own Science Week Movie

Why not run your own science week movie competition in your class or school? It's a lot of fun to do and very easy to get started! You don't need to be up to date with the latest technologies to get involved, just follow our very easy step by step guide and let the fun begin!



Things you will need

- Mobile phone to record the video clips
- Computer to edit and view your movie
- A Hollywood attitude and Oscars in your sights!

Your aim is to make a short science movie that is FUN! Pick a topic and come up with ways to make it interesting:

Dress up as a newscaster and explain how TVs work

Explore earth as an alien; explain how gravity works

Try to defy some laws of physics and see what happens!

Remember: Make the Movie Magic a max of 5 minutes, this will help keep it short, snappy and straight to the point! Jump in and let the action begin!

First things first, what you need is an idea! I'm pretty sure Einstein had some plan before he came up with the Theory of Relativity! Get into groups and rack those brains with a major brainstorming session to answer the following questions.



Science Week Movie Plan!

- What do you want to make the movie on?
- How will you explain the science?
- How are you going to make it interesting?
- What role will each person play?
- How are you going to film it?

1. Lights, Camera, Action!

Recording a video clip on your mobile might not be silver screen quality, but that doesn't mean you won't have fun doing it. Follow these handy tips on how to improve the quality of your photos:

- Keep the phone steady! If you can, rest it on a table top or a stack of books.
- If it's necessary to move the phone to follow what's going on, make sure to try to do it very slowly.
- Adjust the settings on your phone to make the screen size the biggest you can. This can be done through video settings/options on your mobile phone.
- Rather than recording one long clip, record a number of short ones instead. For e.g. set your phone to only take 30 second clips.
- Record outdoors where you can, the light is much better and makes the image clearer.

2. Downloading to your Computer

Once you have recorded your clips, now you need to put them together! The first thing to do is get the clips onto your computer. This will vary from phone to phone and can be done via email from your phone, a lead from your phone to your computer, Bluetooth or by memory card. Have a look at your phone manual to find the easiest way for you to do it.

3. Movie Making Magic

Once you have your clips downloaded to your computer, some very simple editing can transform it into an Oscar nominee! Most clips will need to be edited to make them short and punchy, especially if you have a 5 minute time limit.

There are lots of simple to use and free editing packages available. Chances are there may be one on your computer already. If you are using Windows click on your start menu, go to programmes and look for Windows Movie Maker. With this programme you can add titles, special effects, split your clips, combine clips or even trim your clips. There is a very helpful section on moviemaking tips, be sure to have a look! If you are using a Mac, click on the iMovie icon on your programs Dock or find it in Applications.

4. Roll out the Red Carpet!

It's now time to roll out the red carpet and show your science week movies in all their glory. Why not share the science and the fun with the whole school, or community. Set up a school event and have a student vote on the best science week movie. Remember to send an invitation to the local newspapers!

The Science Week Debate

So you want to be a whacky scientist and have some fun? The first step is to ask the 4 W's and the practical H: 'What, Why, Where, When and How?'

It is these very questions that have lead to the discovery of MP3 players, mobile phones, computer graphics, cameras, TVs, the internet and any other wonderful inventions you can think of!

To get you started on your path to scientific discovery, you need to get thinking logically. What better way to do this and test your logical arguments than to take part in the great Science Week Debate.

Pick one of the debate motions below and get started!

- The internet, a tool for teenagers and timewasters.
- The introduction of GM foods has been a disaster.
- Science, a threat to humanity.
- It is too late for renewable energies to replace fossil fuels.
- Global warming is not a crisis.
- Science, an imaginative and creative discipline.

To continue the debate and to see what everyone else is saying check out our new Bebo page www.bebo.com/ilovescience

The Science Week Quiz

Q1 Who invented the first digital watch?

Q2 In what year did William Higinbotham invent the very first video game ?

Q3 What was the name of the most recent space probe to Mars?

Q4 What does the abbreviation MRSA stand for?

Q5 The binary system of numbers uses what two digits?

Q6 Name the 3 ways heat energy can be transferred

Q7 What is it called when a substance transforms directly from a solid to a gas?

Q8 In a periscope, mirrors must be set parallel to each other and at an angle of?

Q9 What happens first, thunder or lightning?

Q10 What do you hear when an alarm clock rings in a vacuum?

Q11 What sub-atomic particles does the nucleus consist of?

Q12 Give an example of an alloy?

Q13 What is the electric charge of an electron?

Q14 What is the chemical symbol for Gold?

Q15 What is the chemical symbol for sodium?

Q16 The heat energy needed to change the state of a substance (ie: from a liquid to a gas) but not its temperature is know as

Q17 Name the three states of matter

Q18 What is the name of the table that all elements are listed in?

Q19 What does universal indictor tell you about a material?

Q20 What colour does litmus paper turn if it is exposed to acid?

Q21 How many types of teeth does a human have?

Q22 Name the types of teeth?

Q23 How many ribs does a human have?

Q24 Is an orange acidic or basic?

Q25 In a human how many pairs of chromosomes are there?

Q26 What percentage of Oxygen is in the Atmosphere?

Q27 What green pigment is vital in order for photosynthesis to occur?

Q28 What is the gap between neurons called ?

The Science Week Wordsearch

H Y F U I K F H V P Y G O L O I B
G L O B A L W A R M I N G O K L A
R E R E Z R W U B J W O A D K D M
A D C Q E M U R T C E P S N G P Y
V D E D A R A C H B L I C E O D L
I T W E U L C X Z P E J Z L N A A
T U Q R R P H Y S I C S R L V R S
Y Y W T A R E W E R T T E R E Y E
R I D A T O M B U M R E R U C S Z
Z U F S S T I E E C O S Y S T E M
S B V T R O S S X F N D D Y I Q B
G E N E C N T Z B Y K P R L O D I
Q T R R O Q R I A W G D F B N H S
G J A O U W Y D S C I E N C E F P
I O G I L E R I O R T H U L I J K
O D H D D C A M E R A R T U I O S
P H O T O S Y N T H E S I S R T E

Spectrum

Asteroid

Ecosystem

Electron

Gas

Chemistry

Force

Global Warming

Camera

Science

Proton

Physics

Gravity

Gene

Photosynthesis

Electron

Convection

Biology

***Science Week Quiz Answers

Q1	Peter Dimitroff Petroff
Q2	1958
Q3	Phoneix
Q4	Methicillin Resistant Staphylococcus Aureus
Q5	0 and 1
Q6	Conduction, Convection, Radiation
Q7	Sublimation
Q8	45 degrees
Q9	They both occur at the same time, except light travels faster than sound so you hear the lightening first.
Q10	Nothing! Sound is wave, and needs a medium to pass through in order to be heard.
Q11	Protons. Neutrons
Q12	solder, steel, brass, bronze
Q13	0
Q14	AU

Q15	Na
Q16	Latent Heat
Q17	Solid, Liquid, Gas
Q18	Periodic Table
Q19	Acidic/basic or Neutral
Q20	Pink/Red
Q21	4
Q22	Canines, incisors, premolars, molars.
Q23	12
Q24	Acidic
Q25	23
Q26	21%
Q27	Chlorophyll
Q28	Synapse